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ABSTRACT

The purpose of this study was to examine in a developing country context the extent to which students and parents perceive the school view as being relevant to their traditional lifestyle or world view. The study builds on past cross-cultural research by examining the permeability of non-Western students' world view to the official Western school view. This ethnographic study involved interview and case study techniques with six village elders and 15 high school siblings in a South Pacific country. The results suggest strongly that both parents and students hold similar traditional world views which govern their village lifestyles. This study is important in that it shows that their world views largely takes precedence over their school views. The process of formal education is not perceived as improving the knowledge and skills needed for the survival in the village context and is perceived to be of limited viability in relation to traditional values. The main perceived benefit of formal education for students is its improvement of their prospects of earning a monetary income that could be shared with their extended families if they obtain employment in a town. (Author)

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Permeability of Students' World Views to Their School Views

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Abstract

The purpose of this study was to examine in a developing country context the extent to which students and parents perceive the school view as being relevant to their traditional lifestyle or world view. The study builds on past cross-cultural research by examining the permeability of non-Western students' world view to the official Western school view. This ethnographic study involved interview and case study techniques with six village elders and 15 high school siblings in a South Pacific country. The results suggest strongly that both parents and students hold similar traditional world views which govern their village lifestyles. This study is important in that it shows that their world views largely takes precedence over their school views. The process of formal education is not perceived as improving the knowledge and skills needed for the survival in the village context and is perceived to be of limited viability in relation to traditional values. The main perceived benefit of formal education for students is its improvement of their prospects of earning a monetary income that could be shared with their extended families if they obtain employment in a town.

Background and Rationale

While working in a developing country, a professor of geology from the local university once informed me that he believed in both evolution and special creation as viable explanations of origins. When I suggested that there was a disparity between these two explanations, he explained that he believed in evolution when he was at work and in special creation at church. After some discussion, he saw no disparity between the two viewpoints. We believe that this example typifies the assertion that many learners hold simultaneously two different viewpoints that provide disparate explanations of naturally occurring phenomena: a 'world view' and a 'school view'.

In relation to science education, we define the 'school view' as the scientific conceptions that science teachers endeavour to enable students to develop in order to understand their physical worlds. Cobern (1991, p.7) defines 'world view' as the foundational beliefs about the world that support both commonsense and scientific theories. We have adopted a restricted version of Cobern's definition, namely, that the 'world view' refers to the totality of experiences and explanations that have been built up prior to any experience of school instruction and that comprise students' preconceptions of natura phenomena. We are concerned that a disparity exists between students' worldviews and the official school view, especially in school science where Western explanations of natural phenomena can be very different from traditional explanations. In our experience of science teaching in developing countries, many teachers try to enforce the school view while failing to recognise the existence of students' world views. In cases where major disparities exist between students' world views and school views, we believe that students' learning becomes fragmented and lacks cohesiveness. The examination of this disparity was one of the goals of the study reported in this paper.

In many developing countries, the official school view is a product of western culture because the education system remains tied to its original source (Kahn, 1990). In particular, science programs often are taken directly, with little or no adaptation, from Western nations' science programs (Ingle & Turner, 1981; Ogawa, 1986). Often curriculum developers in developing countries fail to recognise that both students and teachers are part of a local culture that, while undergoing significant change, persists in cherishing certain traditions and actions (Kay, 1975). They do not take into account the important cultural milieu into which the curriculum is to be placed.

We believe that a disparity is likely to result between students' world views and schools views in developing countries because, in this context, culture and traditions are 'people-based', whereas science is based on 'things' (Ogunniyi, 1988). This difference produces tensions when teaching science. This tension results in the students developing two different sets of values and attitudes (Kay, 1975) leading to a conflict concerning which set of values and attitudes should be adopted. A consequence of this conflict is 'compartmentalisation', that is, students and science teachers adopt

two, sometimes conflicting, explanations of a phenomenon. One of these explanations is based on traditional village explanations or experiences, and the other is based on what is taught in schools.

We feel that it is important to examine the relationships between students' world views and school views because, as Gilbert, Watts and Osborne (1982) found, the "dominance of the students' prior understanding ... [can] often lead to quite unintended interpretations of what is being taught". The epistemological framework of Gilbert et al. concerning 'prior understanding' was based on Schutz and Luckmann's (1973) foundational theory which argues that the learner tends to typify experiences in order to create meaning structure. Assimilation of these typical experiences forms a 'life-world knowledge' that is both acceptable and persistent. Berger and Luckmann (1966) argue that this intuitive life-world knowledge is constructed during students' early childhood socialisation and enculturation by significant others (e.g., parents and peers). In the context of science education, Solomon (1987) argues that the 'secondary socialisation' process of school science involves less subjective inevitability, and may be experienced as being less compelling. As Banks (1993, p.6) states "the ethnic and cultural experiences of the knower are also epistemologically significant because these factors also influence knowledge construction, use, and interpretation...."

From an epistemological perspective, it is important that teachers have an "understanding of traditional modes of belief about the natural world" (Ingle and Turner, p. 362, 1981). Okebukola (1986) indicates that the cultural background of the learner may have a greater effect on education than does the subject content. This is particularly true of students making observations in science classes. Based on experience, we believe that while students may be somewhat selective about making observations (Jegede & Okebukola; 1991), the real issue is that students are selective about the relationships between their observations, rather than the observations per se. This assertion reflects the contention of Falgout and Levin (1992) that the importance of knowledge lies in its application, results and products for developing country students, whereas Western schools view the learning of knowledge, for knowledge sake, as a virtue. We argue, therefore, that unless students can relate the application to their own world views of what is taught then teaching strategies are likely to be less than effective in enhancing the permeability of the students' world views to their school views. In other words, their world views are likely to remain impervious to their school views.

Purpose of the Study

The purpose of this study was to examine the extent to which world views of students in a developing country context reflect the traditional world views of their parents and elders, especially in relation to influence of their school views. Specifically, the research sought to examine: (a) the traditional world view explanations of natural phenomena held by parents and students, (b) their school view explanations of natural phenomena, and (c) the extent to which the traditional world views are influenced by school views. The initial questions envisaged for this study were designed for a broad

Melanesian culture. However, the existing subculture present resulted in a refocussing of the questions utilised.

Significance of Study

In an integrative research review of the effect of culture on the learning of science in non-Western countries, Baker and Taylor (1993) concluded that attempts to nationalise Western science curricula are likely to be ineffective because of a poor "fit" between students' world views, language meanings, prior beliefs, and those inherent in the subject. This study is significant because it builds on Baker and Taylor's study by examining empirically the permeability of world views in relation to the school views of students of science in a developing country.

Design and Procedure

This ethnographic study (Hammersley & Atkinson, 1983) initially planned to involve interview and case study techniques with six villager elders on an island located in a small South Pacific Melanesian country, called Kantri (a pseudonym has been used to protect the political sensitivity of this study) and 15 local high school students. The interviews sought explanations of the following natural phenomena, for example, where do the ocean waves come from, and what causes thunder and lightning? These natural phenomena were chosen because they form an important part of traditional observations and are explained in many Melanesian cultures. However, the present local subculture caused a refocussing of these questions. Certain expressions describing natural phenomena had no local equivalent translation. Also some questions did not fit into the local lore and traditions.

In actuality, the students interviewed were located in a school in which one of the researchers had taught before the interviews took place. Each village elder and student was interviewed and the conversation was taped and translated. Each participant was asked for their perceptions of how schooling had influenced their traditional views.

Context of Interviews

In order to establish the relevance of the interview with each elder, the interview initially established whether the villager viewed themselves as chiefly being a gardener or a fisherman. Each student was asked for their perceptions of their father's livelihood. This was a consequence of the geographical locations of the interviews. All participants lived on the coast or in the coastal regions. This approach established the line of questioning that could be followed.

Village Elders

The interviews of the three village elders are described first. Contact with these elders was made through a respected local high school principal who was related to two of the interviewees, Laki and Karsoon. Two elders primarily viewed themselves as fishermen. A third elder, Lapun, is known

throughout the island for his knowledge of folklore, and was recommended by the national cultural heritage curator. This elder primarily viewed himself as a gardener. He was initially approached by the same local high school principal.

The interviews were conducted by the principal researcher in a local dialect, Pijin, except in the case of the gardener, Karsoon, who felt more comfortable using a mixture of Pijin and a very localised dialect, quite dissimilar to Pijin. This required translation during the interview by a fellow villager whenever Pijin was not used. Also in this case, there was a large local audience of villagers listening to the conversation. On the whole, they were quiet as far as verbal comments were concerned. Because this villager was somewhat blind and partially deaf, it was necessary to repeat some parts of the interview.

The initial questions asked of each elder established the context of how they perceived themselves, that is, as a gardener or a fisherman, or both. Each elder was initially asked to explain how they would know when it was the best time for fishing or how did they know when or where they could plant their gardens. This line of questioning was designed to relax the interviewee so as to elicit a more candid response. As the interviews progressed, further explanations were sought. Finally, they were asked for their views as to whether schooling helps students to understand better the gardening or fishing process. They amplified their views by commenting on the usefulness of schooling.

Students

All the students who were interviewed attended the same boarding high school. As there are very few high schools within Kantri, each high school contains a fairly representative student sample from across the whole country. The chosen school was particularly so as it was a boarding school and had students from a number of areas that had no nearby high school. That is, most students were from different remote and rural villages. No two students were from the same general area. The principal researcher had taught previously some of the students interviewed and was well known to many of the teaching staff.

Within Kantri, less than 10% of students are given the opportunity to receive further education after completing a 'Western style' high school curriculum. Consequently, most students return to their villages while the privileged few obtain employment in some of the few towns. The majority of the islands within Kantri had no towns but may have a small store that sells trade goods such as salt, material, fishing or gardening tools and fuel. Nevertheless, most students envisage themselves as obtaining what is viewed as comparatively well-paid employment.

The science curriculum in this school is imported from a Western country and has been observed being implemented by the researcher. Science teachers from this high school, formed part of the

sample used in a study of South Pacific science teachers by Giddings and Waldrip (1993). That study reported that South Pacific science teachers were very didactic in their approach to teaching and there appeared very little variation in approaches to science teaching and student experimentation. There is evidence from other studies that teachers are implementing the curricula with little adaptation to the local context.

There are twice as many male students as there are female students in the high schools of Kantri. In this study, there were 11 male students and 4 female students who were interviewed. A factor which affects the number of female students who can be interviewed and is alluded to in the interviews concerns the cultural restrictions on males, particularly those not from the local village, talking to females. It is not culturally acceptable for female students to talk to an adult male unless it is within the confines of a large group of people. This was confirmed by one older female and each male students who was asked about this restriction. All students, except for one mature male student, were of adolescent age.

Students were asked whether they minded being asked questions about their parents. It was explained that all interviews would be kept confidential. They were asked for their parents' explanations about gardening or fishing. The students also were asked how they perceived their parents' possible explanations. The students were asked about how what they learn at school helps them in the village. They were asked whether they felt that schooling prepared them for village life. They were asked questions concerning what would happen if they tried to implement what they had learnt at school within the village lifestyle. Finally, they were asked for their opinion as to which learning (school subjects or village lore) best prepared them for life in the village, and for reasons for their answers.

The 11 male students were very willing to answer the questions asked. Some indicated that they had forgotten some of the traditional stories but were able to provide useful insights into the clash between school and village views. Although the older females were open in their answers they commented that they couldn't participate in the interview in a village setting because village customs do not allow unmarried males and females to converse privately unless closely related. This cultural practice was confirmed by some male students and one older female student. It is assumed that any such case that may occur involves the satisfaction of a sexual desire. Consequently, this was the reason that some students gave as to why one junior female student from a class that the principal researcher had not taught was hesitant to provide answers, even though the interview was being conducted in an exposed and public area of the school. Overall, the impression gained by the principal researcher was that the more well known the researcher was to the students, the more candid and frank were the answers given by the students.

There seemed to be no such problems with the village elders. Even though it is impossible to be absolutely certain, it appeared to the researcher and one local high school principal who was present during the interviews, that the elders were frank and candid during the interviews. The elders were more likely to ask if they had given the answer that I wanted. One elder, Lapun who was the gardener, was more concerned than the others as to whether he had provided suitable answers.

Changes to Initial Plan

The interview questions asked were changed as the questions asking about the moon changing its shape and the earth revolving around the Sun did not form part of the elders' traditional folklore. However, questions about waves, lightning and thunder had natural explanations. Hence to improve the relevance of the interview and to provoke a willing participation in the interview process, questions of each elder focussed particularly on the context of their chief occupation, that is, the ocean or the land environment. Each student gave their perceptions in the context of their father's occupation. As this Melanesian society is largely male dominated and womens' view are, in public, largely considered irrelevant, this study focussed on the perception of the male, that is, the elder or the students' father. This is aptly illustrated by one adolescent male who commented:

> *The boys get a job in town, the girls just wait at home and cook for us. That's a good idea.... To me it's good to leave [girls] back in the village.*

Parents of students were not interviewed as initially planned because the villagers desired to show respect by offering the elders for an interview. The elders are perceived to be the source of all wisdom and are the recognised authority in the area of tribal knowledge. In each case, the elder had received very little or no formal education.

The research questions were changed from focusing on explanations of local natural phenomena, to focusing on traditional methods of gardening or fishing. In fact, the study began to focus on the context (thoughts and actions) of the local people. This approach was perceived to be less threatening to the participants in the study. It was envisaged that this new approach would elicit a more relaxed and open set of responses.

Revised Research Questions

The revised research questions sought to establish:

i) the extent to which residents of Kantri perceive school view as being relevant to their traditional lifestyle or world view, and,

ii) the extent to which the school view permeates their world view of science.

These questions differed from the original questions in that the focus shifted from primarily examining explanations of natural phenomena to perceptions of the usefulness of schooling.

Assertion One

We assert in the context of the local cultural environment of Kantri, the world view of indigenous village-oriented people tends to takes precedence over their school view.

Most students when questioned about explanations of natural phenomena tended to laugh when asked to give local explanations. They felt that the village stories were full of foolishness. When pressed for an explanation, they claimed that they did not know them. 'I don't know' was the typical response amongst students.

This apparent lack of knowledge may be due to:

I) their being isolated from the village life for long durations of time spent living in a boarding school. Many of these children do not see their parents for their entire high school career;

ii) their wanting to appear to be more knowledgeable than their parents. Here they may claim to be ignorant so as to show that they know things that their parents do not know;

iii) the interviewer not being fully taken into their confidence. Here they are unwilling to tell tribal beliefs or secrets in case they break traditional taboos. The principal researcher has experienced and noted that in other Melanesian cultures it may take years before the locals will entrust someone will traditional knowledge.

The village elders complained about the lack of traditional knowledge amongst the young people.

Laki:

> *[the younger generation] did not know the old ways. They see them as foolishness. They think that they know better.*

Lapun:

> *The young people think that the old ways are rubbish*

The elders complained that the young people want to be seen as more knowledgeable than the elders and so the students often refuse to admit that they know or want to learn about traditional knowledge.

However, one mature age student, after giving an explanation concerning traditional methods of gardening, replied:

> *When I tried [the traditional methods] I proved that [they] [worked]. I have no idea why but there must be some [explanation]. I think that it is so because I believe that we must respond to our beliefs.*

Students seemed to believe that they don't understand the reasons behind some of the traditional methods, and that they find them, in practice, to be quite applicable. Students feel that they are compelled to follow them because of pressure to maintain village beliefs.

Because all students interviewed, except for two, felt that they could not provide traditional explanations of natural phenomena, the principal researcher focussed on questioning both students and elders about their traditional methods of gardening or fishing and, more particularly, on their perceptions of schooling.

One of the elders, Lapun, described the traditional methods of gardening. In this discourse he explained the origin of winds associated with cyclone related weather:

> *So when the tarcutta nut comes on the trees and the young kids try and knock them down, we say [strong wind] comes, don't cause the strong winds to start.*

A mature student gave a similar explanation:

> *We have special type of places. There are places where it is forbidden to go. If you go and cut one of the trees in that area, the strong winds will start to blow. If you start to shoot all the fruit from these trees, then there will be a strong wind. So when a child starts eating or shooting these fruits, we say don't touch them or the strong winds will start to blow.*

Traditionally, it is believed that eating certain fruits or disturbing certain trees can cause the start of the cyclone season. People are discouraged from touching these trees.

As well, thunder and lightning are believed to be caused by someone disturbing the sacred place that is occupied by the 'star god'. It is said that when the god is disturbed, he becomes angry and thunder and lightning results. In fact, each major practice has its own particular god.

Although most students were unable (or unwilling) to give traditional explanations of natural phenomena, all students stated that when they are living in the village, they follow the traditional ways. While they may appear not to know the traditional stories, they still follow the resulting traditional practices such as refusing to disturb certain trees so that the cyclone season doesn't start.

Assertion Two

We assert that formal education is not perceived as improving the knowledge and skills needed for survival in the village context but, rather, that the process of formal education is perceived to be of limited practical viability in relation to traditional values.

An important caveat to Assertion Two concerns the common perception that there is some recognition from both elders and students concerning benefits that can occur through schooling. It is perceived that learning to read and write, and obtaining employment are beneficial aspects of education.

This assertion is argued on the grounds that schooling is perceived as being imposed on traditional culture and sometimes conflicts with their established learning practices. Five points supporting this argument are given below.

Firstly, both the village elders and students' parents do not view what is learnt at school as part of their way of living. Rather, the practice of schooling is viewed as a case of cultural dominance. One village elder, Lapun, remarked:

> *The time when new Western ideas about agriculture come, agriculture [prepares the] ground and looks at soil but [replants] again on [the] old garden [beds]. We old people don't call our methods agriculture because agriculture is white man's methods. So we old people still use the old ways.*

This elder explained that Western methods of agriculture instruct them to prepare and plant crops in a manner that is very different from the methods they utilise traditionally. The elders perceive that they are being told how to plant, and that their years of experience in planting tropical crops was being ignored.

In a similar manner, students perceive that some methods they learn in school do not result in producing anything that is superior to how they do things traditionally. One adolescent student described how at school he was taught to grow coconuts in a nursery and to place them a certain distance apart when it came time for planting. Although this practice was quite different to the village technique, its results were not superior:

> *There is not much difference that I can see because those who plant [the way they were taught in school] and those who plant like in the village. They both get good fruit.*

Elders claimed that they had an initial curiosity to learn new methods from the early European educators, but what they learnt was not retained as viable knowledge. It was not perceived as a necessary skill by the elders.

Karsoon:

> *I like Melanesian ways. I wanted to learn Western ways and so when mission came, I went to school [so that I could] learn their ways. I thought I would learn new ways. I use school ways no more.*

Lapun:

> *The white man didn't want us to learn about his ways but only about his religion.*

Almost all students commented that their parents had a negative perception of the value of schooling because schooling is perceived as breaking down traditional values and roles. Schooling was regarded as a cause of the breaking down of traditional family values and as contributing towards the breakup of traditional village society. This perception was dominant in a number of student interviews:

> *[My father] said that school is not good because 'I have seen a lot of other children going to school and then they leave their Mum and Dad. Some of them go for good. Sometimes they never return. They go and work somewhere and they forget about Mum and Dad'. My father said that school is just like sending my children away from home.*

Lapun argued that schooling teaches the students to devalue the traditional methods:

> *The young people think that the old ways are rubbish. education teaches them this but I find the old ways work.*

Although Lapun argues this way, all the elders felt that some students need to be educated in schools for the purpose of learning to read and write and to make money which is then shared with the rest of the family.

Lapun:

> *Some [children] need to go to school and learn white man's ways. Not all [children] should stay at home. But I am happy to stay at home.*

Laki:

> *Some [children] need to go to school so that they can earn money and look after us when we are old.*

Students also appeared to accept the view that some students need to go to school so that life in the village can become less arduous. One adolescent student commented:

> *[Education is important] because we can get a good job and make life much more [comfortable]. [My father] thinks that I will give him money [after I get a job].*

A partial explanation of the perceived breakup of traditional society is reflected in the perception that schooling is seen as teaching students to do activities in such a way as to oppose village praactices. For example, one student stated:

Some students when they go back to the village, they just do sorts of things that village people don't like. When there is something to do, they do different things.

This adolescent male student was stating that students take back to the village habits and practices that they have learnt at school. These practices may not be approved by the village elders. For example, males talking to females outside the group situation. Some students no longer feel that they understand village traditions and so do not cooperate in certain aspects of society. At times, they are no longer interested in these practices and may feel that they should not participate in them.

Secondly, schooling is not regarded as improving life in the village. Students and elders failed to see how the new ways, except for learning to read and write, improved life in the village. The new ways were not regarded as being more productive or as leading to improvement in the quality of living. As previously discussed, one student remarked that he did not see much difference between the agricultural output using traditional techniques compared to implementing methods learnt in school:

There is not much difference that I can see because those who plant [the way they were taught in school] and those who plant like in the village. They both get good fruit.

Others commented that they find the old ways always work. One elder, Karsoon, commented:

School helped me to [learn] farming but now I find the village ways are better.

A senior student remarked that traditional ways help you to survive in the village and that schooling does not enable this to happen. He went on to elaborate that schooling is only useful if you have money:

Because school only helps in the village if you have money. If you don't have money, traditional skills and knowledge are far more important. Because you can do things, all the resources are there. If you don't know how to handle them, and say build house with local bush materials and all this, it would be quite hard for you to survive in the village.

A village teenager with almost no schooling commented:

I feel that village ways are more relevant to my life. I don't need the new ways to live but I do need to know my traditional ways.

After just a few months attending school, this student left as he felt that schooling had nothing to offer him in skills that are needed for daily living. He felt that he would be better equipped for life if he learnt from the village elders.

Thirdly, schooling was viewed as clashing with what traditionally made sense. An elder commented:

> *We didn't learn anything to help us. We didn't learn about gardening but we already knew how to garden. The agriculture came and they taught us to keep gardening in the same place but we knew you had to change the place where we gardened. When we go to another place, we had to cut down and build the new garden.*

A student said that the village people would laugh if he tried to do within the village setting what he had learnt in school.

In fact, schooling is perceived to be in conflict with traditional methods of learning. For instance, at school, copying other students' material is forbidden whereas in the village, learning is based on copying.

> *Inter:* *Are there somethings that you are allowed to do in the village that makes it hard for you to learn at school?*
>
> *Stud:* *Oh yes, like copying other's work. In the village, everything is, you can choose certain things to follow.*
>
> *Inter:* *In the village, is it good for you to copy?*
>
> *Stud:* *Yes, that is the way we learn. In school we must do our own.*

Finally, schooling is not necessarily regarded as leading to improvements in their quality of life unless they can get a job and earn money. This point was made particularly clear by a number of students:

> *If I don't get a job after I have finished school, they think I am a failure. If I pass and don't get a job, they think I am wasting my time.*
>
> *Only if you are earning money, you are doing alright.*
>
> *The village people expect me to get a job when I finish school. They expect me to send them money.*
>
> *The new ideas require you to work hard and have money but before if you worked hard, you had plenty to eat. The new ideas try to make people lazy. I follow the old way, the custom way. The old ways are better.*

Karsoon commented that:

> *I went to school because I thought I would make money.... I thought that I would learn the white man's ways. He had [better] ways of doing things.*

There is a perception that having a job leads to making money. In this society, having more money than others is one way a person can gain prestige within the society. Those who have prestige are important and expect to be shown respect. Education is not seen to be a valuable experience unless they do obtain a job. Otherwise the cost of schooling is seen as a wasted investment. The student is required to repay all monies spent on his education and so by not obtaining employment, the investment is seen as a failure and not contributing to the wealth of the village.

Conclusion

When we designed this study, we were concerned about the role of Western school science in shaping the future lives of peoples of non-Western cultures. Our experience of living and teaching in largely non-Western countries suggested that science curricula that are imported directly from Western industrialised countries might be less than relevant to the traditional world views held by members of the local culture. We were aware of research that indicated that the cultural background of the non-Western learner has a strong influence on their learning of Western school science, and we wondered whether the reverse might also be true. That is, we wanted to investigate the extent to which the imported Western school view of science permeated the world views of students in non-Western cultures.

We conducted an ethnographic study that investigated the relationship between the world view and school view of a group of adolescent students in a Melanesian culture. The students had left temporarily their traditional village lifestyles while they attended a residential high school in a rural area where they were studying a Western-oriented school science curriculum. We were able to gain insights into the traditional world views of villagers by interviewing several respected elders who told stories about their traditional ways of gardening and about their early experiences of Western schooling. We focussed our investigation on the perceived influence of school views on traditional village beliefs and practices.

Although very few of the students were able (or willing?) to provide traditional explanations of local natural phenomena, which was one of our chief interests, all claimed to follow traditional practices when they returned to village life. Because of the limited employment prospects on the island, most students would resume village life on completion of high school. It seemed obvious to us that the

formal education they were receiving at school should serve an important role in their future lives, whether they sought employment in towns or returned to their villages.

However, we were disappointed to learn that, generally, students and elders did not perceive formal education as useful for improving the knowledge and skills needed for survival in the village context. For example, school science was regarded as providing methods of agriculture that were either inferior to or no better than traditional agricultural practices. Indeed, there was a general perception that formal education conflicted with traditional values and practices, and served to undermine young people's respect for traditional lifestyles. The main perceived benefit of formal education for young people was its improvement of their prospects of earning a monetary income that could be shared with their extended families if they were able to obtain employment in a town.

In this brief study of traditional Melanesian culture, we obtained disturbingly little evidence of the influence of the Western school view of science on young people's traditional world views. We were left with the distinct impression that much of what goes on in the science classroom of the high school in rural Kantri was of little relevance to the future lives of most of the young students that we interviewed. Of course, we did not observe the science classes attended by these students and, therefore, cannot judge the extent to which the teachers were attempting to adapt their Western science curricula to local needs. Nevertheless, whatever may be going in these classes the outcome is less than impressive from the points of view of local people. Further research needs to be conducted elsewhere in Kantri, and in other non-Western cultures that are importing Western science curricula, to determine the extent to which traditional world views are, by default, remaining impervious to the school view of science.

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